Gigabit USB 2.0 Ethernet Adapter

User’s Manual

ABOUT THIS MANUAL

This manual is designed for use with the Gigabit USB 2.0 Ethernet Adapter. Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. The manufacturer does not make any representations or warranties (implied or otherwise) regarding the accuracy and completeness of this document and shall in no event be liable for any loss of profit or any commercial damage, including but not limited to special, incidental, consequential, or other damage.

SAFETY INSTRUCTIONS

Always read the safety instructions carefully:

- Keep this User's Manual for future reference
- Keep this equipment away from humidity
- If any of the following situation arises, get the equipment checked by a service technician:
  - The equipment has been exposed to moisture.
  - The equipment has been dropped and damaged.
  - The equipment has obvious sign of breakage.
  - The equipment has not been working well or you cannot get it to work according to the User's Manual.

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1. Introduction

This Gigabit USB 2.0 Ethernet adapter is a cost effective solution that converts a USB port into a 10/100/1000Base-T Ethernet port. It enables low cost and affordable Gigabit Ethernet network connection to desktop, notebook PC, and embedded system using popular USB ports. No need to purchase an expensive Gigabit network interface card and to spare a PCI or Cardbus slot, just using your existing USB ports and you can upgrade your network connection speed.

Features

- Supports 10/100/1000 Mbps auto-sensing capability
- Supports Auto MDIX (straight and cross network cable auto-detection)
- USB specification 1.0, 1.1 and 2.0 compliant
- Supports USB full and high speed modes with bus power capability
- IEEE 802.3, 802.3u, and 802.3ab (10Base-T, 100Base-TX, and 1000Base-T) compatible
- Supports both full-duplex and half-duplex operation in Fast Ethernet
- Supports Jumbo packet of up to 9KB
- Supports suspend mode and remote wakeup via link-up and magic packet

Package Contents

Before installation, please check the items of the package.

- Gigabit USB 2.0 Ethernet Adapter x1
- Driver CD x1
- Quick Installation Guide x1

System Requirements

- Operating Systems：

  Windows 2000 32-bit,

  Windows XP 32-bit , Vista 32-bit and 64-bit,

  Mac OS X v10.4 and v10.5.
- One available USB port

LED Status

LED	Color	Description
Link	Green	OFF when there’s no network traffic.
		On for LAN activity. Blinking when the network is connected.
1000Mbps	Green	OFF when there’s no network traffic.
		On for LAN activity. Blinking when connection to a 1000Mbps network.

2. Installation and Connection

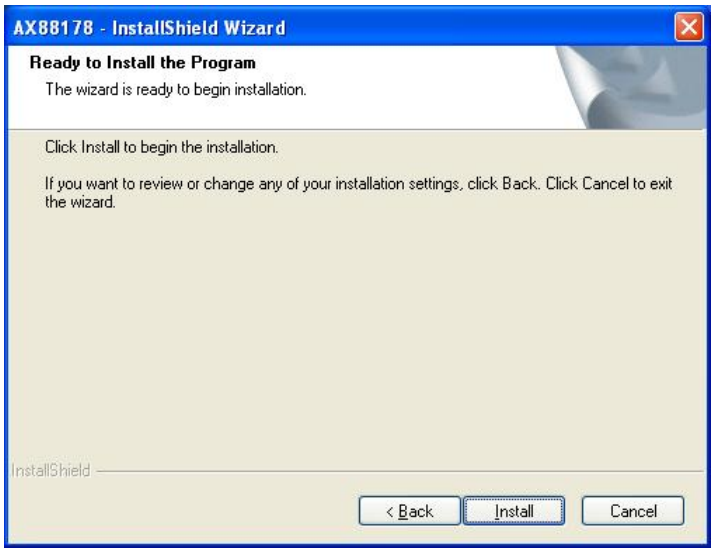
Installing Drivers

On Windows 2000 / XP

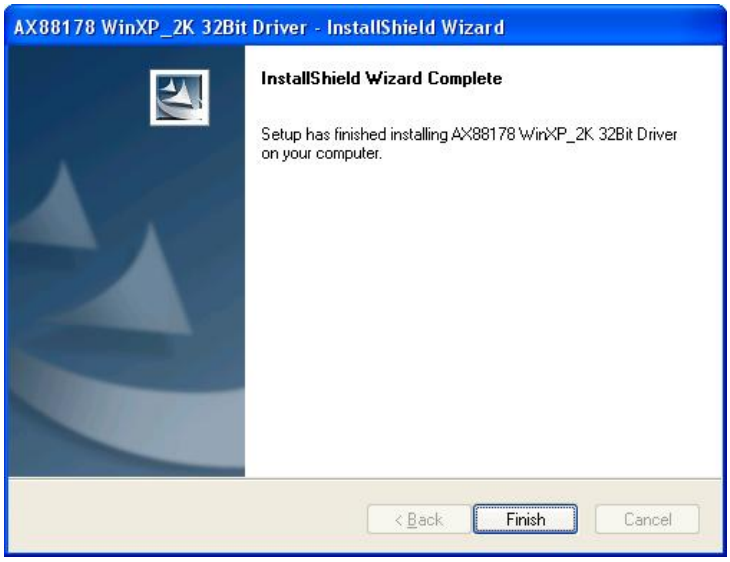
Note: DO NOT connect the Ethernet adapter to your computer before completing the driver installation.

1. Insert the provided CD into your disc drive. Locate and double-click the **Setup.exe** file in the **Driver** folder to launch the setup program.
2. Click **Next** and **Install** the driver.

AX88178 - InstallShield Wizard
Welcome to the InstallShield Wizard for AX88178
The InstallShield Wizard will install AX88178 on your computer. To continue, click Next.
< Back
Next >
Cancel

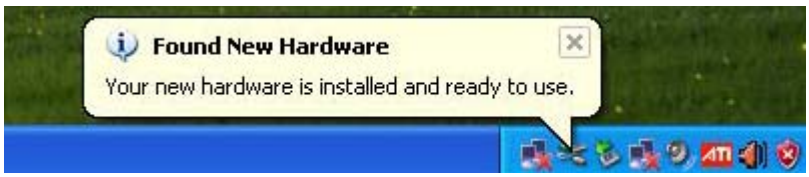

AX88178 - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

3. Click **Finish** to complete the installation.


AX88178 WinXP_2K 32Bit Driver - InstallShield Wizard
InstallShield Wizard Complete
Setup has finished installing AX88178 WinXP_2K 32Bit Driver on your computer.
< Back
Finish
Cancel

4. Connect the Ethernet adapter's USB end to a free USB port of your computer.

   Then you will see the dialog on your desktop.



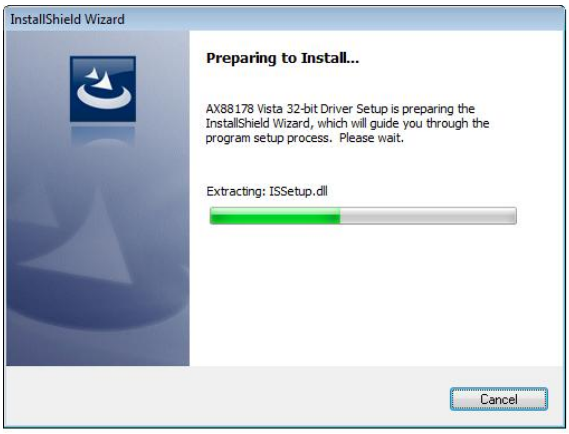
*Actual strings depend on your operation system. These screen shots are from Windows XP 32-bit and might vary slightly for each operation system.

5. Connect an Ethernet cable to the Ethernet port on the adapter and connect the other end of the Ethernet cable to your network hub, switch or router. Then you can use the USB 2.0 Ethernet Adapter.

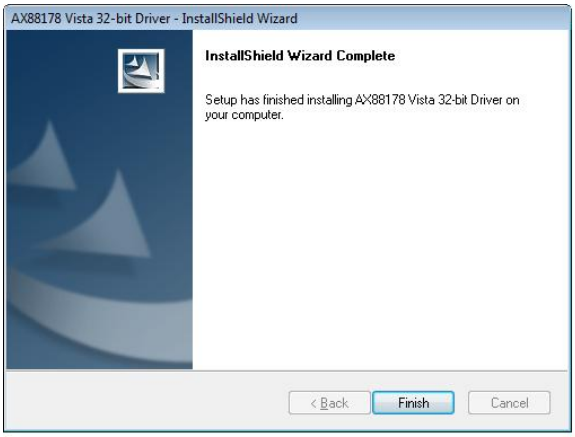
On Windows Vista

Note: DO NOT connect the Ethernet adapter to your computer before completing the driver installation.

1. Insert the provided CD into your disc drive. Locate and double-click the **Setup.exe** file in the **Driver** folder to launch the setup program.


InstallShield Wizard
Preparing to Install...
AX88178 Vista 32-bit Driver Setup is preparing the InstallShield Wizard, which will guide you through the program setup process. Please wait.
Extracting: ISSetup.dll
Cancel

2. Wait for the program to install the drivers.
3. Click **Finish** to complete the installation.


AX88178 Vista 32-bit Driver - InstallShield Wizard
InstallShield Wizard Complete
Setup has finished installing AX88178 Vista 32-bit Driver on your computer.
< Back
Finish
Cancel

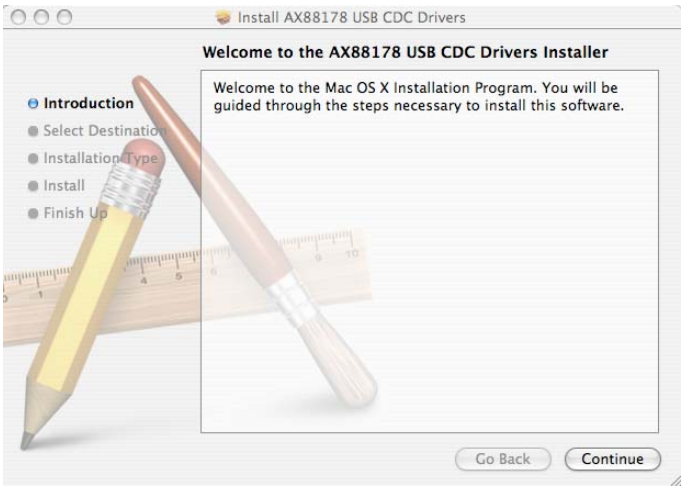
*Actual strings depend on your operation system. These screen shots are from Vista 32-bit and might vary slightly for each operation system.

4. **Connect** the Ethernet adapter's USB end to a free USB port of your computer. At this stage, different situations may occur according to your peration system.
5. Follow the instructions below to complete the installation. Then you can use the USB 2.0 Ethernet Adapter.

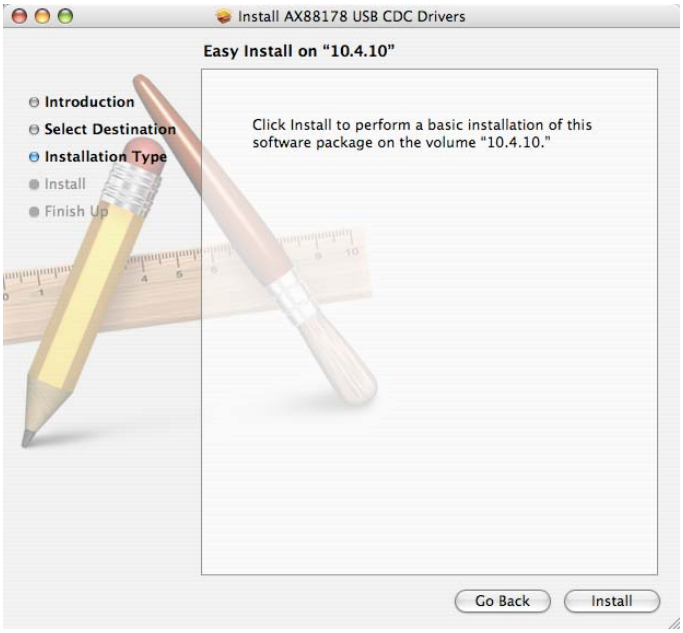
On MAC OS x 10.4 / 10.5

Note: DO NOT connect the Ethernet adapter to your computer before completing the driver installation.

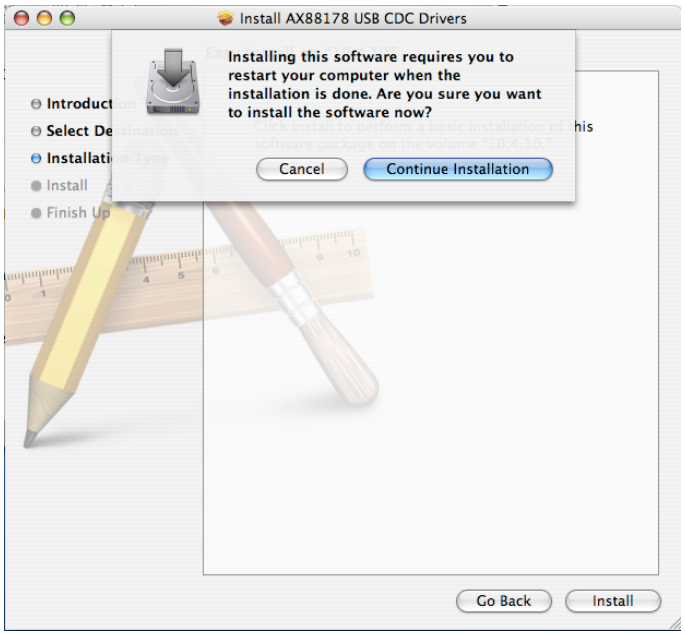
1. Insert the provided CD into your disc drive. Locate and double-click the **Setup.exe** file in the **Driver** folder to launch the setup program.


Install AX88178 USB CDC Drivers
Welcome to the AX88178 USB CDC Drivers Installer
Introduction
Select Destination
Installation Type
Install
Finish Up
Welcome to the Mac OS X Installation Program. You will be guided through the steps necessary to install this software.
Go Back
Continue

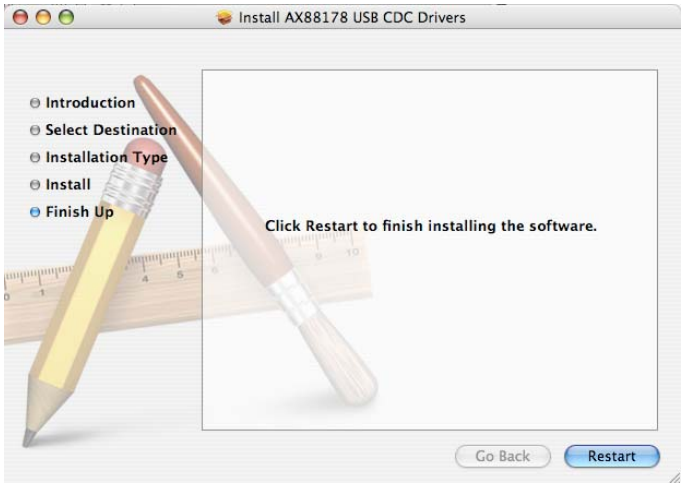
2. Click "Continue". You will get the message as below and click "Install".



3. Click “Continue installation” to install .

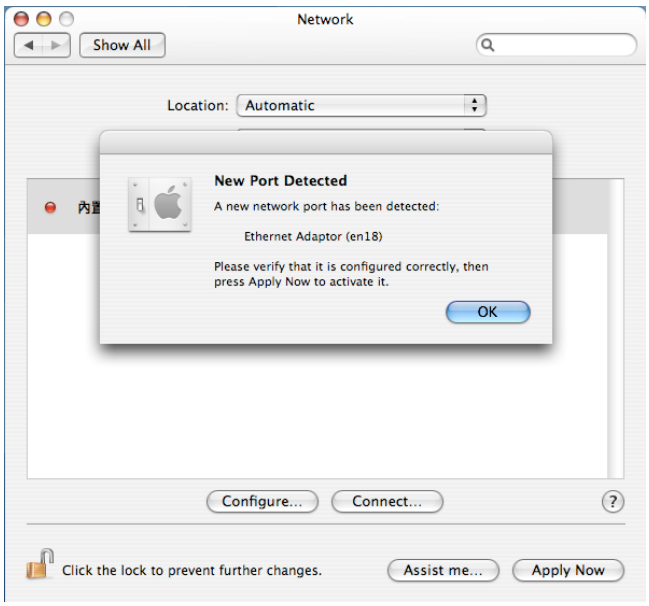


4. Click “Restart”, the computer will be restarted once installation is completed.

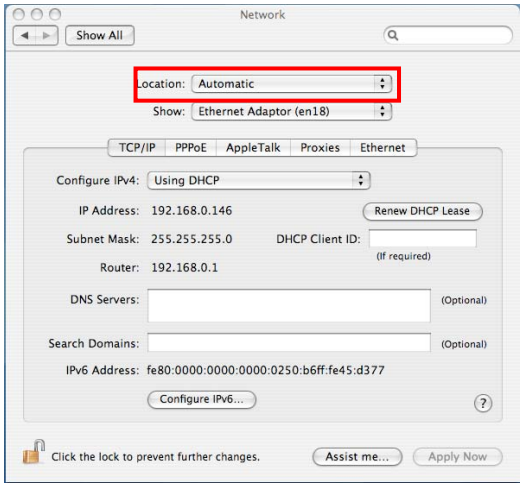


5. Connect the Ethernet adapter to a free USB port.

6. Start **System Preferences** and select **Network**, you'll see the screen as below prompted and please select **OK**.



7. You will find that a new Ethernet network interface is available.



*Actual strings depend on your operation system. These screen shots are from MAC 10.4 and might vary slightly for each operation system.

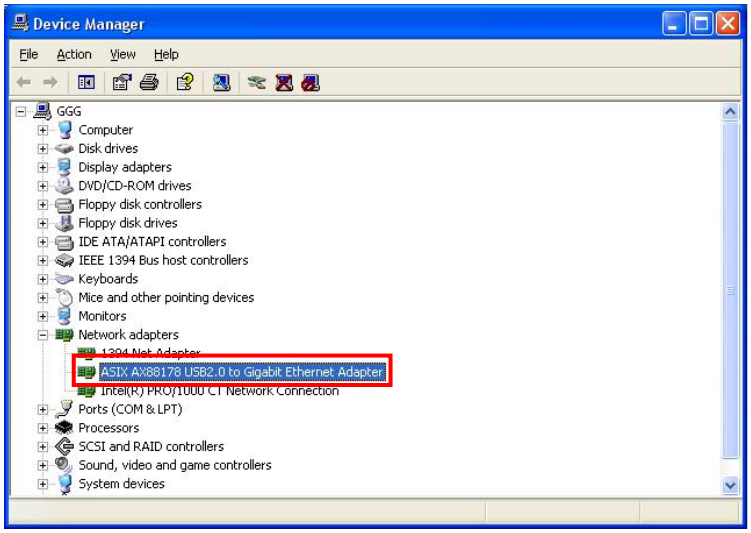
Now the installation is complete. You can connect the adapter to a network device by an Ethernet cable.

The Link LED should light up green to indicate a proper physical connection between the Ethernet adapter and the network. If the Link LED doesn't light up, please verify the cable connections between all the network devices.

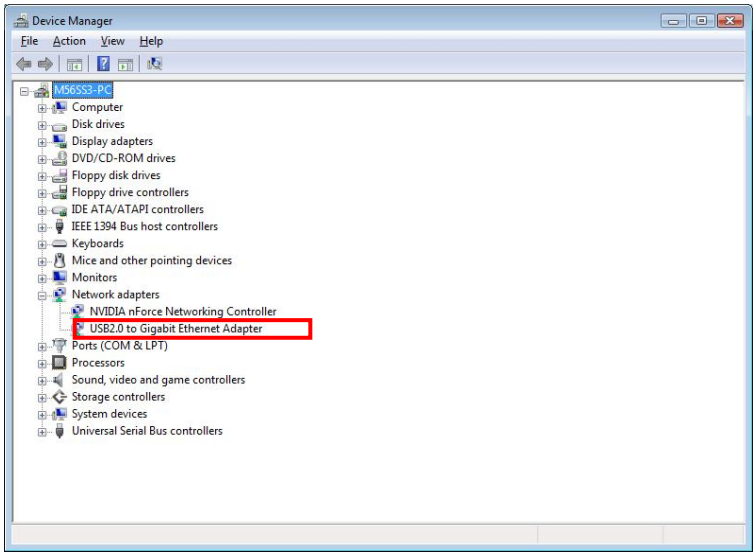
Verifying the Driver Installation

To verify your Ethernet adapter installation, please launch **Device Manager** by the steps below:

- On ***Windows 2000/XP*** Right-click the My Computer icon on the desktop and select **Properties** > **System** > (**Hardware**) > **Device Manager**.



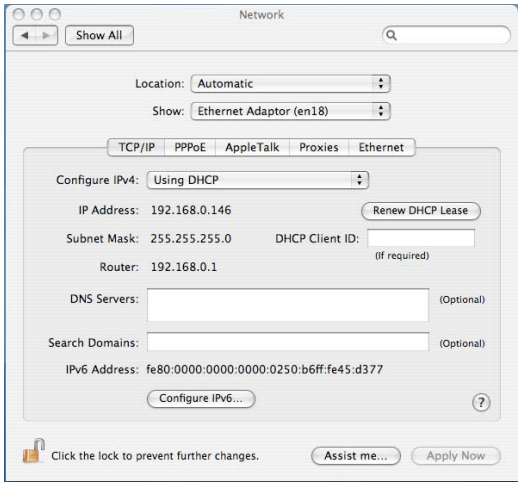
- On ***Windows Vista***: Right-click the **Computer** icon on the desktop and select **Properties** > **Device Manager**.



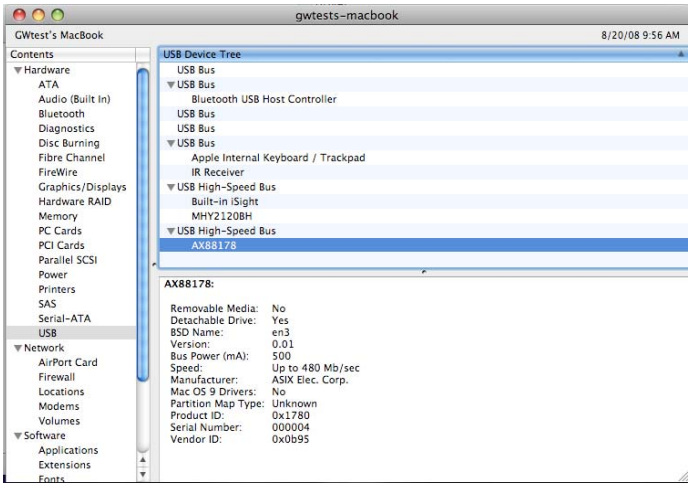
In the **Network adapters** group, a string similar to **USB2.0 to Gigabit Ethernet Adapter** should be displayed.

If there is a question or exclamation mark next to that item, then the driver is not properly installed. Please delete the item, unplug the adapter and repeat the installation steps.

- On ***Mac OS x10.4/ 10.5*** click "System Preferences" on the desktop and select **Network** > **Show** > **Ethernet Adapter** > **Renew DHCP Lease**.



Once you finish the installation, you can open **GO** > **Utilities** > **System Profile** > **Hardward** > **USB** > to verify if your Ethernet adapter is properly installed.



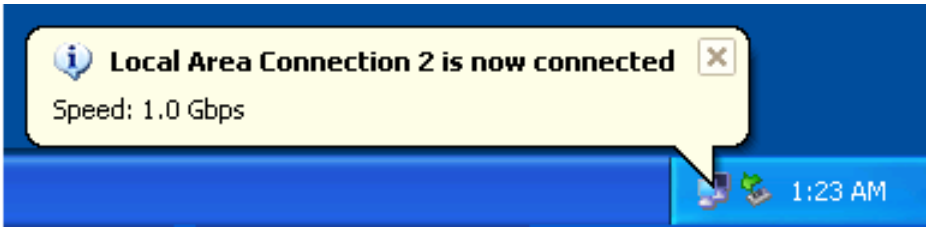
Connecting to a Network

Now you can connect your network device, e.g, switch, router, DSL/Cable modem, to the adapter's LAN port via an Ethernet cable.

Notes on Ethernet Cables

- Sometimes a so-call crossover Ethernet cable is required for connection to certain network equipments. As the adapter's LAN port supports Auto-MDIX feature, it eliminates the need to use crossover cables.
- When the Ethernet adapter is used in a Gigabit network, it's recommended that you use Category 6 Ethernet cable for higher transmission speed.

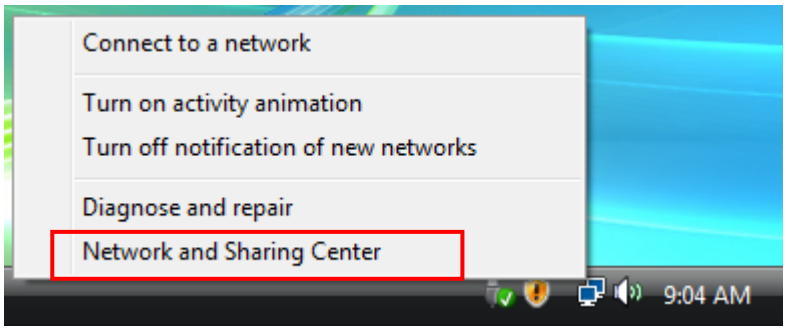
On **Windows 2000/XP**, upon your connection, a message pops up in the notification area indicating your connection speed.



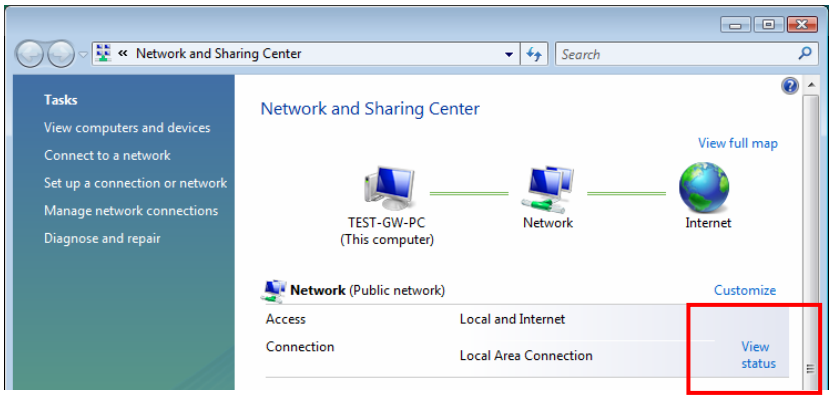
The adapter's AutoSense feature can automatically detect the network's maximum line speed. To have a 1000Mbps connection, your network device (e.g., switch, router or DSL modem) must also support 1000Mbps.

On **Windows Vista**, you can view the connection speed by the steps below:

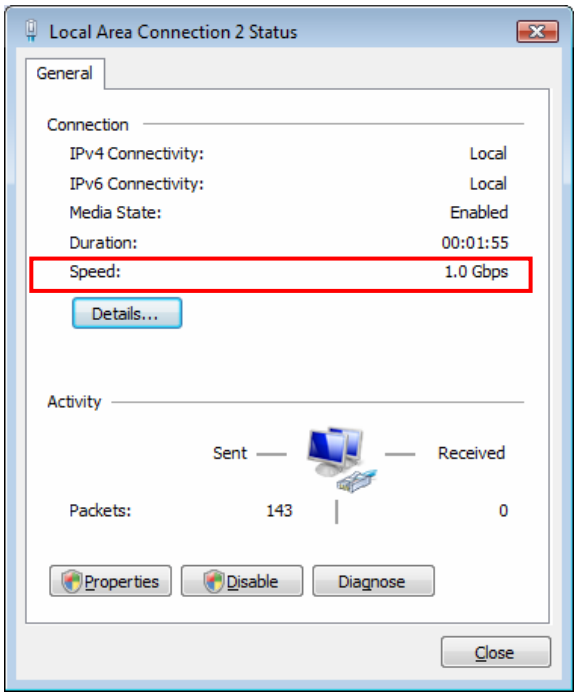
1. Right-click the network icon in the system tray and select **Network and Sharing Center**.



2. Click **View status** for the connection of your Ethernet adapter.



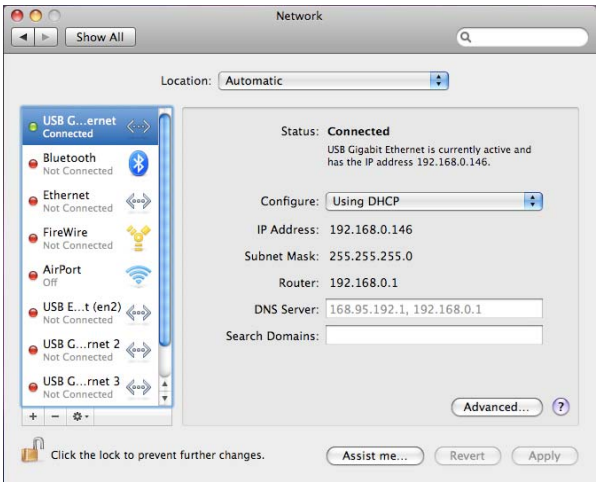
3. Current connection speed will be displayed among the connection information.



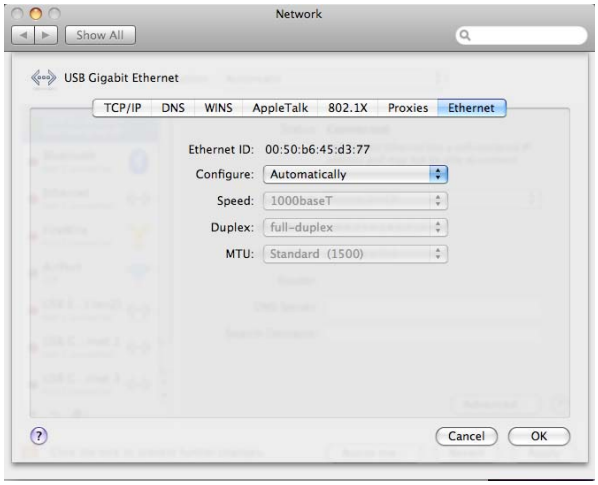
On **Mac OS x10.4 / 10.5** , you can view the speed of connection by the steps below:

1. Click “System Preferences” on the desktop > Network > “USB Gigabit Ethernet” in the left side column.

   * If you can’t connect the internet by using DHCP, please install the provided driver.



2. Click Advanced > Ethernet and you will see the speed of your internet.



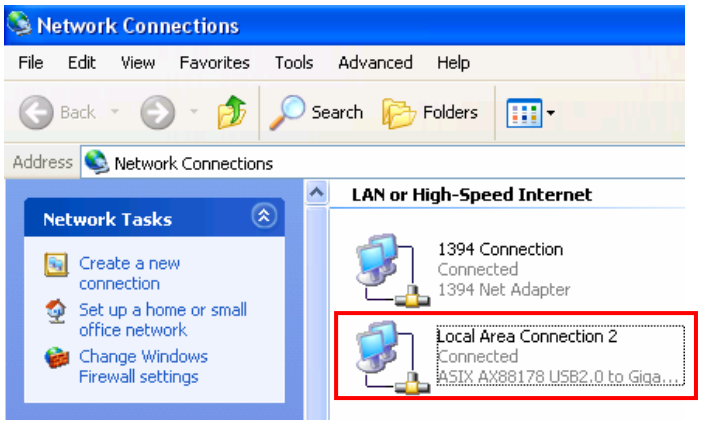
Configuring Network Settings

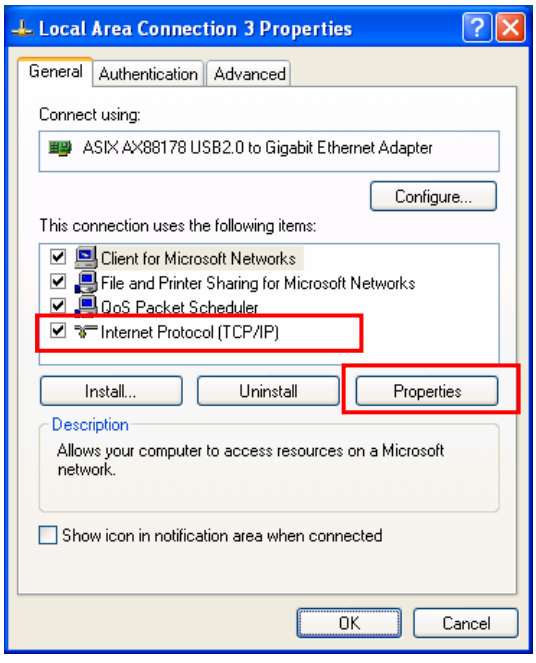
You should configure your Ethernet adapter as required according to your network environment. If you are unsure about the settings, consult with your network administrator for assistance. The following describes how to launch the network settings window for your Ethernet adapter.

Windows 2000/XP

After the installation, a local area connection icon is automatically created for your Ethernet adapter in the **Network Connections** folder. You can access **Network Connections** folder by selecting **Start** > **Settings** > **Control Panel** > **Network and Internet Connections**.

In the **Network Connections** folder, double-click the connection icon indicating your adapter. Then the **Local Area Connection Properties** window appears for user to make required settings.

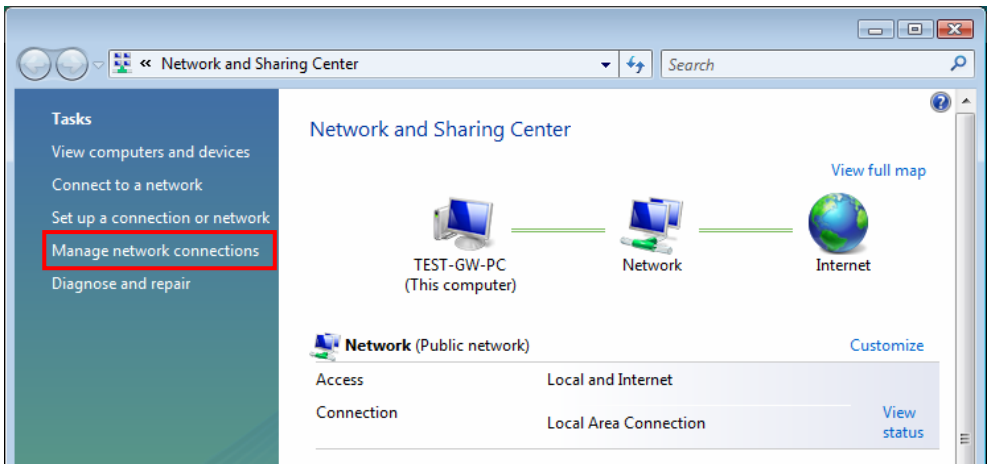



Local Area Connection 3 Properties
General Authentication Advanced
Connect using:
ASIX AX88178 USB2.0 to Gigabit Ethernet Adapter
Configure...
This connection uses the following items:
Client for Microsoft Networks
File and Printer Sharing for Microsoft Networks
QoS Packet Scheduler
Internet Protocol (TCP/IP)
Install... Uninstall Properties
Description
Allows your computer to access resources on a Microsoft network.
Show icon in notification area when connected
OK Cancel

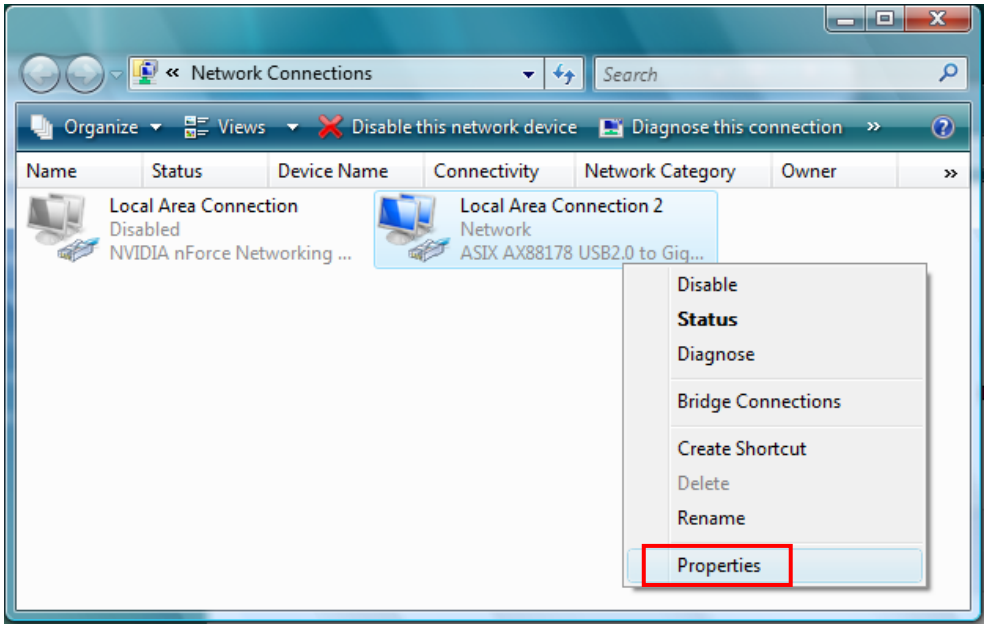
Windows Vista

To configure network settings for your Ethernet adapter on Windows Vista:

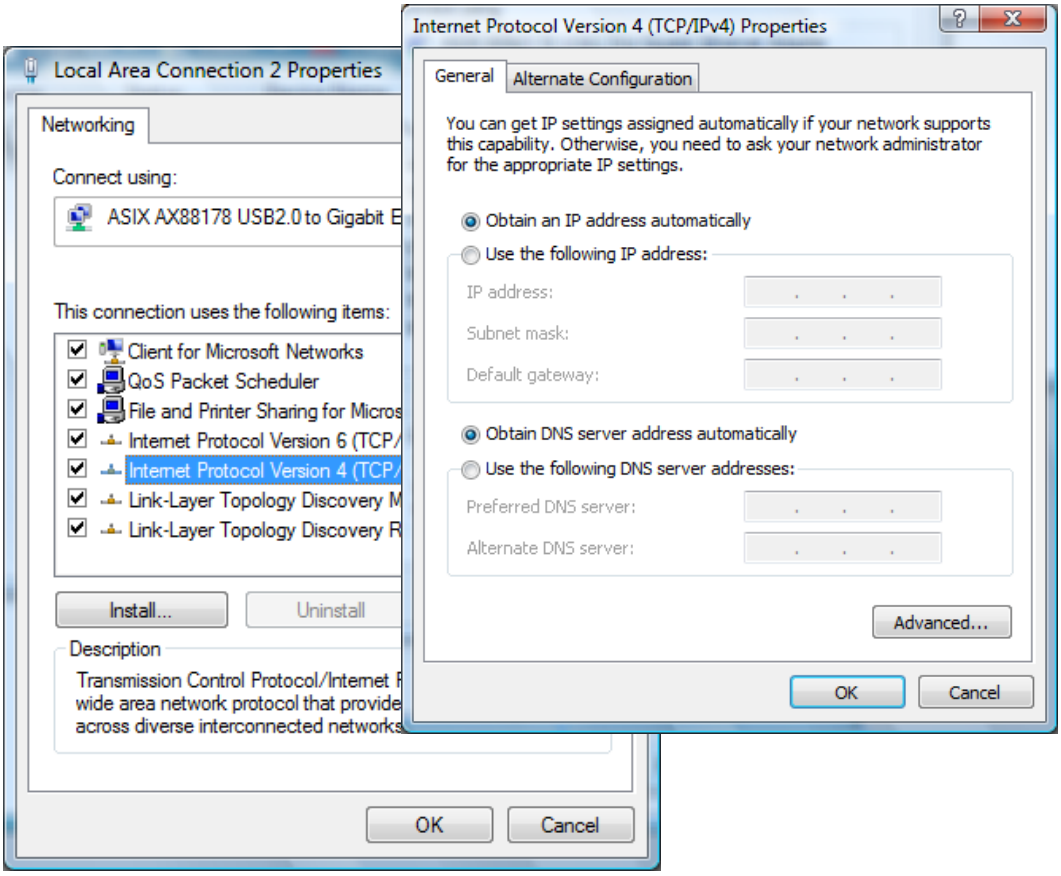
1. Right-click the network icon in the system tray and select **Network and Sharing Center**.
2. Click **Manage network connections**.



3. Right-click the Local Area Connection icon indicating your network adapter and click **Properties**.



4. Then the **Local Area Connection Properties** window appears for user to make required settings.



3. Specifications

Network Standards	IEEE 802.3: 10Base-T IEEE 802.3u: 100Base-T IEEE 802.3ab: 1000Base-T
Data Transfer Rates	Ethernet: 10Mbps (Half/Full Duplex) Fast Ethernet:100Mbps (Half/Full Duplex) Gigabit:1000Mbps (Half/Full Duplex)
Data Bus	USB 2.0 (1.1 compliant)
LED Indicators	Link: Off when there's no network traffic and On for LAN activity. Blinking when connection to a 10/100Mbps network. 1000Mbps: Off when there's no network traffic and On for LAN activity. Blinking when connection to a 100Mbps network
Power Consumption	950mW
Power Management	Suspend mode, hibernation mode
Network Interface	Female RJ45 jack
RAM	Embedded 20KB SRAM for RX packet buffering and 20KB SRAM for TX packet buffering
Operating System Support	Windows Vista 32-bit and 64-bit, XP 32-bit, 2000 32-bit MAC10.4 and10.5
Dimension	78 x 48 x 20mm (L x W x H)
Weight	60g
Working Environment:	Operation temperature: 10 ~ 40 degree Storage temperature: -10 ~ 80 degree
Certification	FCC, CE

* Specification is subject to change without further notice.

4. Regulatory Compliance

FCC Conditions

This equipment has been tested and found to comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference

(2) This device must accept any interference received. Including interference that may cause undesired operation.

CE

This equipment is in compliance with the requirements of the following regulations: EN 55 022: CLASS B

WEEE Information

For EU (European Union) member users:
According to the WEEE (Waste electrical and electronic equipment) Directive, do not dispose of this product as household waste or commercial waste. Waste electrical and electronic equipment should be appropriately collected and recycled as required by practices established for your country. For information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.